

WHAT IS CLAIMED IS:

1. A endcover assembly for a combustor of a turbine comprising:

an endcover having an aperture opening through opposite internal and external end faces thereof;

a seal cover secured to the endcover overlying the aperture opening through the external end face of the endcover;

a fuel assembly secured to and projecting internally from said endcover, said fuel assembly including a structure defining a purge passage extending in said aperture;

a seal between said seal cover and said endcover to preclude fluid leakage externally of the endcover assembly from said external face thereof;

said seal including an annular spring generally C-shaped in cross-section having opposite edges biased to engage said seal cover and a seat forming part of said endcover.

2. An assembly according to Claim 1 wherein said seat includes an annular recess formed in said external end face of said endcover for receiving a portion of said seal, said seal cover including an annular relief formed in a surface thereof in registration with an annular portion of said endcover about said seal, affording secondary sealing surfaces between the seal cover and the endcover.

3. An assembly according to Claim 1 including a counterbore formed in said endcover inwardly of said seal, said seal cover including a cylindrical projection received in and about said counterbore to seal against fluid leakage and restrict relative lateral movement of the seal cover and endcover.

4. An assembly according to Claim 1 wherein said aperture through said endcover includes a stepped bore opening through said internal face of said endcover and having a first axial facing shoulder, a stepped insert in said bore having a second shoulder facing in an axial opposite direction and in registration with said first shoulder of said endcover, and at least one annular seal having axially spaced edges engageable against said registering shoulders of said endcover and said insert to seal against internal fluid leakage.

5. An assembly according to Claim 4 wherein said one annular seal is generally W-shaped in cross-section.

6. An assembly according to Claim 4 wherein said one annular seal is generally C-shaped in cross-section.

7. An assembly according to Claim 4 wherein said seal of said endcover bore and said insert has a plurality of axially registering shoulders, and a generally annular spring extending between each of said axially registering shoulders to seal against internal fluid leakage.

8. An assembly according to Claim 7 wherein each of said seals are generally W-shaped in cross-section.

9. An assembly according to Claim 7 wherein at least one of said springs is generally C-shaped in cross-section and another of said springs is generally W-shaped in cross-section.

10. An assembly according to Claim 7 wherein said insert is bolted to the endcover with said bolted joint biasing said seals in an axial direction to form said sealed joints.

11. An endcover assembly for a combustor of a turbine comprising:

an endcover having a stepped bore opening through an internal, axially facing, end face thereof and having a first axially facing shoulder;

said endcover including a plurality of manifolds for conveying fluids;

a stepped insert disposed in said stepped bore and having a second shoulder facing in an opposite axial direction and in registration with said first shoulder of said endcover, said insert having passages in communication with said manifolds, respectively;

a seal between said endcover and said insert having axially spaced legs engageable against said registering shoulders of said endcover and said insert to seal against internal fluid leakage between said endcover and said insert; and

a fuel nozzle secured to said endcover and having passageways in communication with the fluid passages, respectively, in said insert.

12. An assembly according to Claim 11 wherein said one seal is generally W-shaped in cross-section.

13. An assembly according to Claim 11 wherein said one seal is generally C-shaped in cross-section.

14. An assembly according to Claim 11 wherein said seal between said endcover bore and said insert includes a plurality of axially registering shoulders, and a generally annular spring extending between each of said axially registering shoulders to seal against internal fluid leakage.

15. An assembly according to Claim 14 wherein each of said springs is generally W-shaped in cross-section.

16. An assembly according to Claim 14 wherein at least one of said springs is generally C-shaped in cross-section and another of said springs is generally W-shaped in cross-section.

17. An assembly according to Claim 14 wherein said insert is bolted to the endcover with the one bolted joint biasing said springs in an axial direction to form said seals.